The Idaho Transportation Department's
Chip Seal Coat Warranty Guide

US-95, Milepost 232, Whitebird Hill, Looking North
A Desirable Chip Seal Coat

January 2017

The Idaho Transportation Department (the Department) uses chip seal coats for pavement preservation and skid resistance. Chip sealing a pavement protects it from sun, oxidation, weather, water, oil and gas, and improves friction for drivers.

The intent of a chip seal coat warranty is for the Contractor to warranty workmanship and materials against Contractor Obligated Defects (CODs) for the warranty period as outlined in this guide, the standard specifications, and in the contract.

The chip seal coat warranty guide is to be used to assist in identifying CODs and noncontractor obligated defects (NCODs). **The intent of chip seal coat warranty inspection is to identify systematic or catastrophic failures and not to identify small, inconsequential imperfections less than the COD threshold percentage.** Small defects and imperfections are expected in the chip sealing process and repair will not be required by the Contractor.

If the total combined COD area is less than 1.5% or as specified in the contract, the Contractor will not be required to make repairs. **This area is measured on what has failed, NOT based on the procedure to use to fix the CODs.** Each Contractor may have a different repair procedure or strategy to fix the CODs. The Contractor's repair methods and plans will be submitted and approved prior to beginning repairs.

As specified in 403 and/or the contract, the Engineer and the Contractor will meet onsite and conduct a field evaluation of the constructed chip seal coat. The Engineer and the Contractor will review and document all CODs.

The warranty guide provides photographs to assist in determining if a defect is a COD or a NCOD and the extent of the defects. The most serious defects in chip seal coat work are:

- Loss of aggregate.
- Streaking (grooves or ridges are visible in the chip seal coat surface).
- Flushing/Bleeding (excess asphalt in the wheel path).
    - Some tracking by traffic is acceptable and can be considered a NCOD (refer to example photographs).
- Poor adhesion/bond to road surface.

Localized repair work or reconstruction of the entire chip seal coat will be dependent on the severity, type, and extent of the CODs identified.

Snowplow Damage

Chip seal coat failures generally appear prior to the onset of winter weather and failures only accelerate once exposed to winter weather. Snowplows will exacerbate the failure and the defects may take on the appearance of snowplow damage, thus timely monitoring and documentation by the Engineer and the Contractor is imperative to establish whether defects are classified as CODs or NCODs.

Standard COD Allowance

The Department has established a standard COD allowance of 1.5%. Each contract may adjust this COD allowance percentage for a particular project (e.g., shaded, mountainous, river valley with an existing deficient, raveling, rough pavement).

Table of Illustrations

Longitudinal Joints/Meet Line: Chip Loss

Longitudinal Joint: Unacceptable chip loss (CODs)

Longitudinal Joint: Unacceptable chip loss (CODs)

Longitudinal Joint: Unacceptable chip loss (CODs)

Longitudinal Joint: Acceptable chip loss

Transverse Joint: Chip loss at the end of the spread

Transverse joint: Unacceptable chip loss (CODS)

Transverse joint: Unacceptable chip loss (CODS)

Transverse Joint: Acceptable chip loss

Plugged Distributor Nozzle (Snivie): Chip Loss

Plugged nozzle: Unacceptable chip loss (CODs)

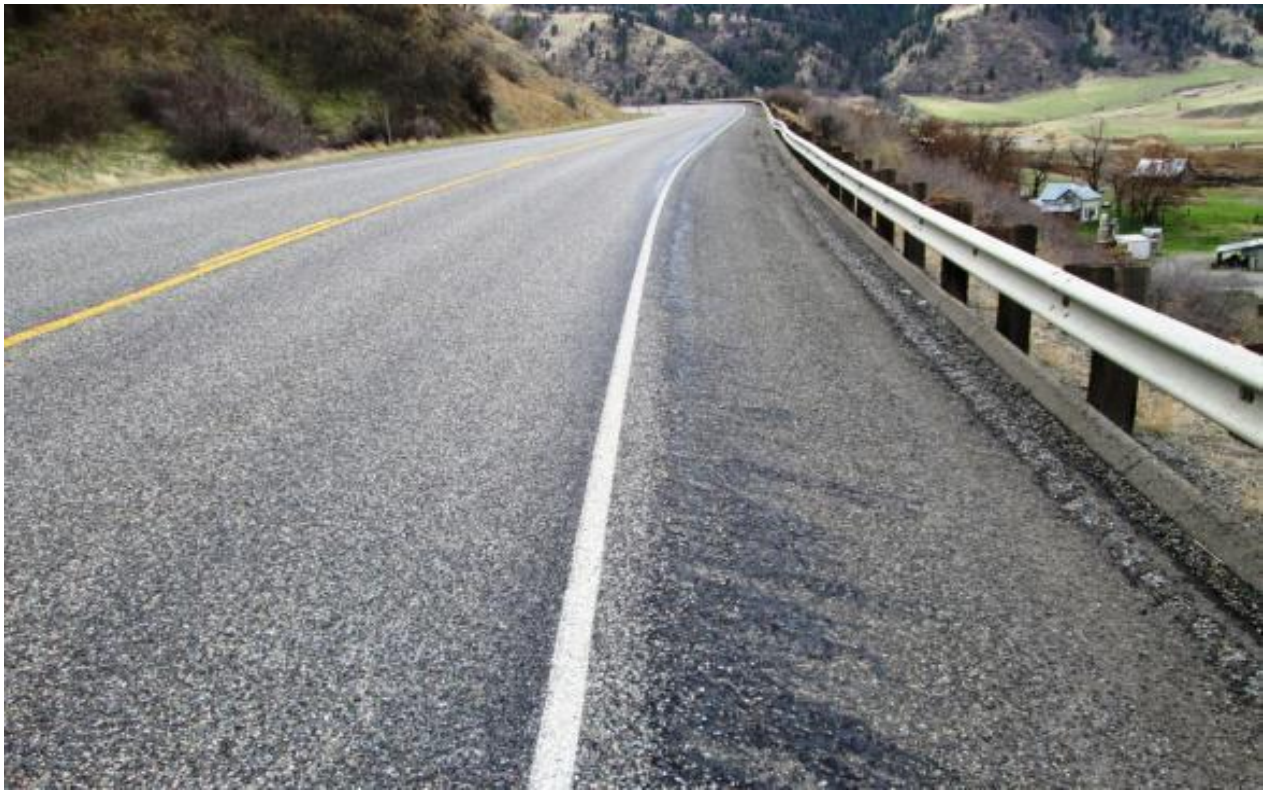
Plugged nozzle: Unacceptable chip loss (CODs)

Plugged nozzle: Acceptable chip loss

Over Wetting of Chips During Application: Chip Loss

Over wetting of chips: Unacceptable chip loss (CODs)

Over wetting of chips: Acceptable appearance



Chip Loss After Brooming

Brooming: Unacceptable chip loss (CODs)

Brooming: Unacceptable chip loss (CODs)

Bleeding/Flushed Surface

Bleeding/Flushing: Unacceptable surface (CODs)

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Tracking by Traffic

Tracking: Expected to minimize with time

Tracking: Acceptable appearance at the end of the warranty period

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Traffic: Various Conditions (CODs and NCODs)

Traffic: Chip rolling, unacceptable surface (CODs)

Traffic: Chip loss from turning movements (CODS)

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Traffic: Chip loss from turning movements (CODs)

Traffic: Skid marks (NCODs)

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Traffic: Skid marks (NCODs)

Traffic: Fuel spill or fire (NCODs)

Traffic: Tire chain damage (NCODs)

Traffic: Tire chain damage (NCODs)

Chip Loss from Snowplows

Snowplow: NCODs

Snowplow: NCODs

Snowplow: CODs Exacerbated by Snowplows – Unacceptable

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Design: Unacceptable chip loss (CODs)

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Design: Unacceptable chip loss (CODs)

Design: Chip Sealing on newly paved asphalt pavement; unacceptable chip loss (CODs)

Weather Conditions

Weather: Constructed late in the season, unacceptable chip loss (CODs)

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Weather: Constructed late in the season, unacceptable chip loss (CODs)

Weather: Rain and cool weather following construction, unacceptable chip loss (CODs)

Location/Conditions of Chip Seal Coats

Location: Shady/ high humidity areas, Unacceptable chip loss (CODs)

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Maintenance Blade Patch Failures

Maintenance Patches: Must be documented and approved to be exempt (NCODs)

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Desired Appearance at the End of the Warranty Period

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